A 45-year-old man comes to the physician because of progressive daytime sleepiness and fatigue during the past 2 years. He says that he frequently wak night and has been told he snores loudly. He is 180 cm (5 ft 11 in) tall and weighs 159 kg (350 lb); BMI is 49 kg/m^2. Physical examination shows peripheral he knees. A loud S_2 is heard on auscultation of the chest. This patient's symptoms are most likely caused by an episodic decrease in which of the followin

) Lung volume
) Oxygen saturation
) Pulmonary vascular resistance
) Systemic vascular resistance
) Venous return

A patient with cancer who is being treated with high-dose chemotherapy has severe bone marrow suppression. Which of the following cytokines is most lik
beneficial for the bone marrow suppression?

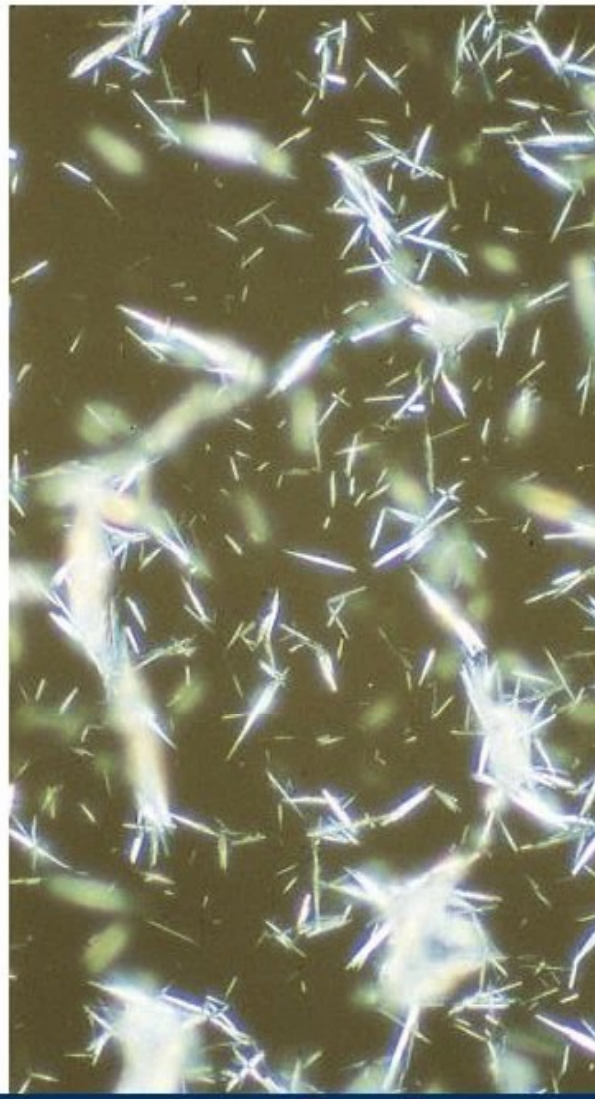
) Granulocyte colony-stimulating factor
) Interferon-α
) Interferon-γ
) Interleukin-2 (IL-2)
) Interleukin-4 (IL-4)
) Interleukin-6 (IL-6)
) Transforming growth factor-β
) Tumor necrosis factor

A 56-year-old man who is admitted to the hospital for treatment of pneumonia is found to have advanced lung cancer. His respiratory status improves with antibiotic therapy. Before therapy is completed, he refuses palliative radiation therapy and wants to be discharged. He states that he is all alone, that no on him, and that he does not want to waste someone else's money for treatment. He promises that he will return in 6 months after he makes money from selli hat will cure arthritis. Which of the following is the most appropriate next step?

) Arrange for ambulatory administration of antibiotics
) Determine whether the patient has decision-making capacity
) Institute home visit care
) Seek a court order to force the patient to stay in the hospital
) Transfer the patient to a psychiatric outpatient facility

A 47-year-old man comes to the physician because of recurrent episodes of joint pain during the past 3 years. He describes these as abrupt in onset and involving principally his ankles or knees, usually only one joint at a time. He does not take any medications. Physical examination shows yellow-white nodules at the tips of several fingers, as well as over the soles of the feet. His left knee is warm, tender, and swollen with dusky, erythematous overlying skin. A photomicrograph of joint fluid aspirate is shown. The crystals shown are most likely composed of which of the following?

A) ~~Basic calcium phosphate (hydroxyapatite)~~
B) Calcium pyrophosphate dihydrate
C) ~~Cholesterol~~
D) ~~Corticosteroid ester~~
E) ~~Methylmethacrylate~~
F) Monosodium urate



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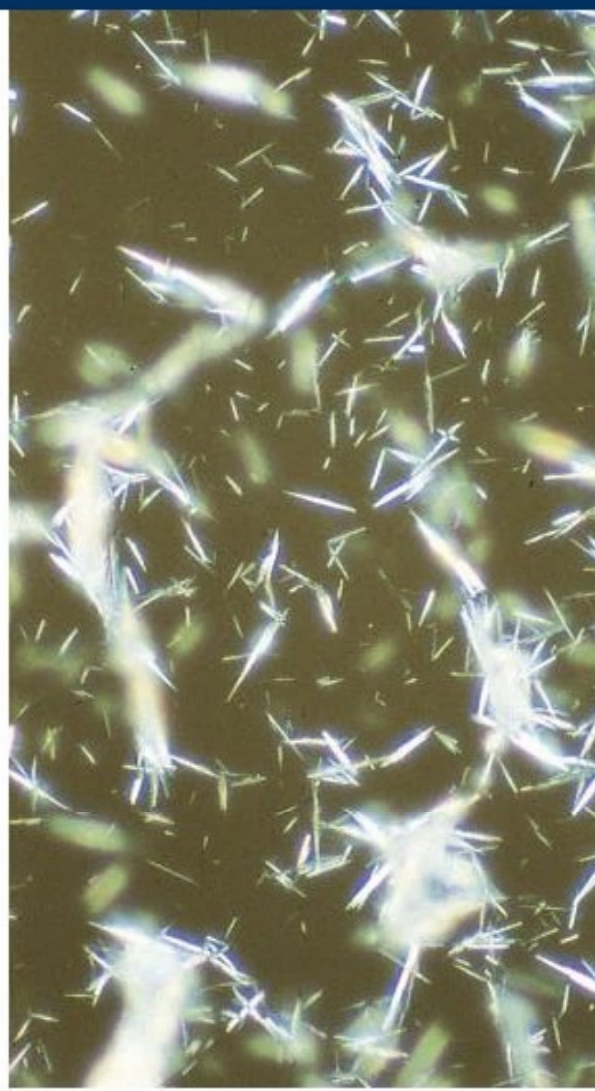


A) ~~Basic calcium phosphate (hydroxyapatite)~~
B) Calcium pyrophosphate dihydrate
C) ~~Cholesterol~~
D) ~~Corticosteroid ester~~
E) ~~Methylmethacrylate~~
F) Monosodium urate

A 28-year-old man with chronic hepatitis C comes to the physician because of fever and progressive shortness of breath during the past 2 days. His tempe
39.3°C (102.7°F), pulse is 110/min, respirations are 28/min, and blood pressure is 120/70 mm Hg. Physical examination shows wasting and intercostal retr
Crackles are heard over both lung fields. A chest x-ray shows diffuse hazy infiltrates. His leukocyte count is 2000/mm^3 (90% segmented neutrophils, 5% ly
and 5% monocytes). To help explain the cause of his illness, this patient should be tested for which of the following other chronic viral infections?

) Cytomegalovirus
) Epstein-Barr virus
) Hepatitis D
) HIV
) Human herpes virus 6

A 35-year-old man with small cell carcinoma of the lung has systemic hypertension and hypokalemia. The most likely cause of these findings is ectopic se
of the following hormones?

) ACTH
) ADH (vasopressin)
) Epinephrine
) Parathyroid hormone related peptide
) Vasoactive intestinal polypeptide

n which of the following stages of the cell cycle are mitotic cyclins synthesized?

) G_0
) G_1
) S
) G_2
) M

n investigator is studying a new drug for the treatment of patients undergoing adjuvant radiation therapy. The drug is designed to be administered prior to i
inimize localized tissue damage at the irradiated site. This drug most likely inhibits which of the following effects of external beam radiation?

) Depurination
) DNA ligase inactivation
) DNA polymerase activation
) Formation of pyrimidine dimers
) Free radical formation
) Tautomerization

9-year-old boy who was adopted from an African country 2 weeks ago is brought to the physician because of difficulty walking and fatigue. Femoral, popli
ial, and dorsalis pedis pulses are equal and full. Neurologic examination shows weakness of plantar dorsiflexion and foot intrinsics. He has a broad-based
ensation to light touch is decreased over the lower extremities; vibration sense is absent. Laboratory studies show:

Hemoglobin	decreased
Hematocrit	decreased
Mean corpuscular hemoglobin	normal
Mean corpuscular hemoglobin concentration	normal
Mean corpuscular volume	normal
Platelet count	normal
Serum lactate dehydrogenase	increased

his patient most likely has a deficiency of which of the following vitamins?

) B_2 (riboflavin)
) B_{12} (cobalamin)
) C
) D
) E

70-year-old man comes to the physician because of a 1-year history of progressive shortness of breath and nonproductive cough. He is now unable to tol
ctivity. Physical examination shows clubbing of the fingers. Inspiratory crackles are heard at both lung bases. A CT scan of the chest shows patchy subple
pacities. Examination of a lung biopsy specimen shows a heterogeneous pattern with alternating areas of normal lung and interstitial inflammation and fibr
uestioning, he has not taken any medications or had environmental exposures associated with pulmonary fibrosis. Which of the following pulmonary functi
atient will most likely show a result greater than the predicted range?

) Alveolar-arterial P_{O_2} difference
) Diffusing capacity measured with carbon monoxide
) ~~Functional residual capacity~~
) ~~FVC~~
) Residual volume
) ~~Tidal volume~~

public health consultant is contacted by a health maintenance organization for recommendations about primary health prevention techniques for a popula
ges 30 to 40 years. Which of the following is the most appropriate primary preventative recommendation for this group?

) Abstinence from alcohol
) Low-carbohydrate diet
) Regular exercise
) HIV testing every 6 months
) Annual mammography

13-year-old boy is brought to the physician by his mother for an examination prior to participating on the school bowling team. His mother says that he has xcused from gym class this year because of chest swelling that began 6 months ago. He is reluctant to take off his shirt. Physical examination shows bilate ildly tender, rubbery nodules palpable under the areolar region. Sexual development is Tanner stage 3. After empathizing with the patient about how he m mbarrassed by his condition, it is most appropriate for the physician to state which of the following?

) "Most boys experience this between the ages of 9 and 10 years."
) "This will typically resolve within the next 12 to 18 months."
) "We need to do a few blood tests to rule out hormonal disorders."
) "You'll gradually get more comfortable with your own body."
) "You're the only one who really notices it."

65-year-old woman with well-controlled type 2 diabetes mellitus comes to the physician for a follow-up examination. At her last office visit 1 year ago, phys
xamination and laboratory studies showed no abnormalities. Her temperature is 37.2°C (99°F), pulse is 82/min, respirations are 18/min, and blood pressur
35/80 mm Hg. Physical examination shows no other abnormalities. Laboratory studies show:

Hemoglobin	11.2 g/dL
Hematocrit	33%
Serum	
Urea nitrogen	30 mg/dL
Creatinine	2.1 mg/dL

odominal ultrasonography shows decreased size of both kidneys. MR aortography shows bilateral proximal renal artery stenoses. Which of the following is
agnosis?

) Atherosclerosis
) Congenital renal artery hypoplasia
) Fibromuscular dysplasia
) Takayasu arteritis
) Temporal arteritis

35-year-old woman has difficulty urinating 2 days post partum. She has a long history of asthma. Which of the following mechanisms is both an indication ontraindication for bethanechol in this patient?

) β-Adrenergic antagonism
) Anticholinesterase action
) Histaminergic stimulation
) Nicotinic antagonism
) Parasympathomimetic stimulation

3-week-old female newborn is brought to the physician for a follow-up examination after the results of newborn screening showed an increased serum co
mmunoreactive trypsin. Cystic fibrosis is suspected. At 4 months of age, her sweat chloride concentration is greater than 60 mmol/L (N<40). Molecular anal
cludes a panel of the 70 most common cystic fibrosis transmembrane gene mutations is done. Results show a mutation in one allele. Which of the followir
e findings in this patient?

) The immunoreactive trypsin test result is a false positive
) The patient has another mutation that was not included in the previous analysis
) The patient has a different disorder that is a phenocopy of cystic fibrosis
) The patient has a mutation in another gene for a protein that interacts with *CFTR*
) The sweat chloride test result is a false positive

3-month-old boy is brought to the physician because of yellow eyes and skin and weakness since birth. Physical examination shows jaundice, large fontan
idfacial area, hypotonia, and hepatomegaly. Serum studies show:

Total bilirubin (mainly direct)	increased
AST	increased
ALT	increased
Very-long-chain fatty acids	increased

liver biopsy specimen shows foamy, lipid-filled hepatocytes, necrosis, and absence of a specific organelle. This organelle is most likely which of the follow

) Golgi complex
) Lysosomes
) Mitochondria
) Peroxisomes
) Smooth endoplasmic reticulum

A 17-year-old girl is brought to the hospital by ambulance 45 minutes after sustaining a closed-head injury during a motor vehicle collision. She is in a com
examination shows multiple bleeding lacerations over the head. An MRI of the brain shows a 4-cm, right-sided intracranial hematoma with possible brain-s
Emergency craniotomy is indicated, but several attempts to contact the patient's parents to obtain permission for the procedure are unsuccessful. The phys
o proceed with the operation without permission. This decision by the physician is most consistent with which of the following ethical principles?

) Beneficence
) Common good
) Integrity
) Nonmaleficence
) Respect for autonomy

A 17-year-old girl comes to the physician because she has never had a menstrual period. She is not sexually active. She is 180 cm(5 ft 11 in) tall and weig
o); BMI is 15 kg/m². Breast development is Tanner stage 5, and pubic and axillary hair development is Tanner stage 1. Pelvic examination shows a blind v
Which of the following is most likely to be found on further testing?

) Decreased serum estrogen concentration
) Decreased serum luteinizing hormone concentration
) Hyperplastic adrenal cortices
) Increased serum testosterone concentration
) Streak ovaries
) Uterus

A 29-year-old man is brought to the emergency department because of a 1-hour history of bilateral jaw pain that began immediately after he tried to bite in
double cheeseburger. Physical examination shows excessive drooling and an inability to elevate the mandible. An x-ray of the skull shows bilateral anterio
he temporomandibular joints. Reduction of the temporomandibular joints is recommended. Relaxation of which of the following muscles is most likely to fa
procedure?

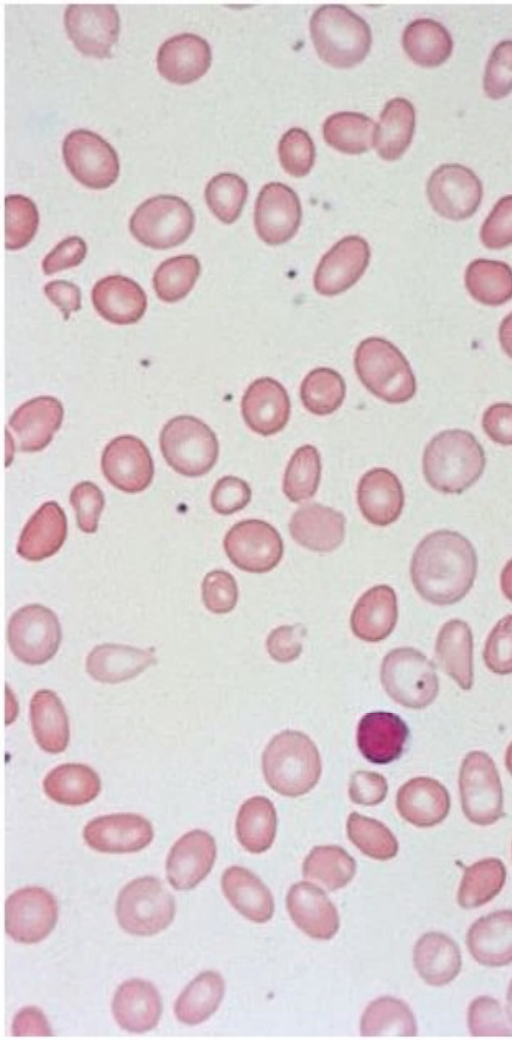
) Anterior belly of digastric
) Buccinator
) Lateral pterygoid
) Levator veli palatini
) Mylohyoid

A 68-year-old man has loss of pain and temperature sensations on the right side of the face and left side of the body, paralysis of the vocal cord on the righ
of the gag reflex on the right. Which of the following regions of the brain stem is most likely to be involved?

) Left ventromedial medulla
) Right ventromedial medulla
) Left dorsolateral medulla
) Right dorsolateral medulla
) Left ventrolateral pons
) Right ventrolateral pons
) Left ventromedial midbrain
) Right ventromedial midbrain

A 73-year-old woman has had easy fatigability for 2 years. She had an ileal resection for Crohn disease 10 years ago. She has extremely pale oral mucosa. A peripheral blood smear is shown. Which of the following is the most likely mechanism of this disorder?

A) Decreased serum transferrin concentration
B) Deficiency of glucose 6-phosphate dehydrogenase
C) Deficiency of protoporphyrinogen oxidase
D) Failure of conversion of N^5-methyltetrahydrofolate to tetrahydrofolate



A 58-year-old man comes to the physician because of a 3-day history of progressive malaise, increased urinary frequency, dribbling of urine, a feeling of in bladder emptying, and deep, dull pelvic pain. He has not had scrotal or testicular pain or blood in his urine, and there has been no trauma. He now urinates He has a history of mild asthma well controlled with inhaled albuterol as needed. He takes no other medications. He does not smoke, drink alcohol, or use s sexually active with one female partner. The penis and scrotum appear normal. Digital rectal examination shows an enlarged, exquisitely tender prostate ollowing infectious agents is the most likely cause of these findings?

) ~~*Chlamydia trachomatis*~~
) *Escherichia coli*
) Mumps virus
) ~~*Neisseria gonorrhoeae*~~
) *Ureaplasma urealyticum*

An obese 57-year-old man comes to the physician for a routine examination. He has smoked 2½ packs of cigarettes daily for 40 years. Physical examinati
dyspnea. A chest x-ray shows a mass in one lobe of the right lung. Examination of a biopsy specimen obtained on bronchoscopy shows squamous metapl
bronchial mucosa. Which of the following best describes the changes in this patient's bronchial mucosa?

) Activation of c-Fos resulting in increased proliferation of atypical squamous epithelial cells

) Chronic irritation leading to decreased blood flow and atrophy of the mucosal lining

) Irreversible change in the basal cell layer leading to development of abnormal squamous epithelial cells

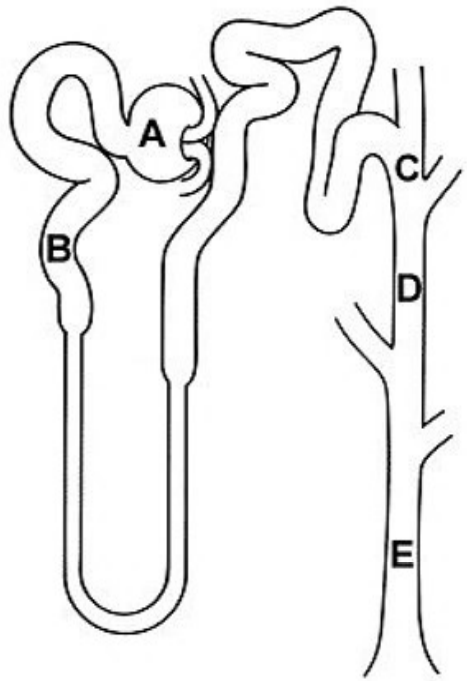
) Respiratory epithelial hyperplasia with compression into a flattened squamous pattern

) Normal ciliated columnar epithelium replaced by normal squamous epithelium

A 75-year-old man with a 10-year history of progressive renal failure comes to the physician for a follow-up examination. Laboratory studies show a serum concentration of 40 mg/dL, and a serum creatinine concentration of 3 mg/dL. Ultrasonography of the urinary tract shows a solitary hydronephrotic kidney a ureter. The most likely cause of this patient's renal failure is an increase in which of the following?

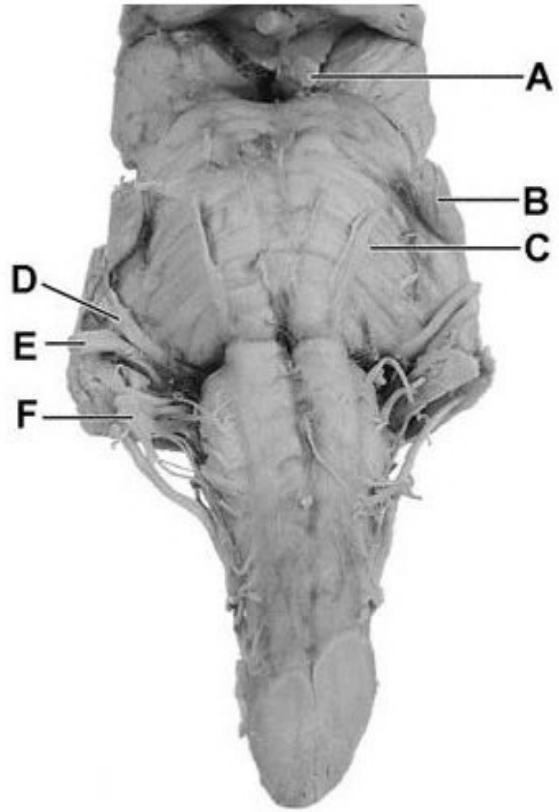
) Hydrostatic pressure in Bowman space
) Hydrostatic pressure in glomerular capillaries
) Hydrostatic pressure in peritubular capillaries
) Oncotic pressure in peritubular capillaries
) Oncotic pressure in renal tubules

A 35-year-old man with quadriplegia develops a urinary tract infection. He was admitted to the neurology unit of the hospital 7 months ago. He has had an ndwelling urinary catheter during this entire period. A culture of urine grows an organism that is susceptible only to aminoglycosides. Gentamicin is admini nephrotoxicity occurs in this patient, it is most likely to originate in which of the following labeled sites depicted in the drawing of the nephron shown?



A) B) C) D) E)

A 57-year-old man has had hoarseness and difficulty swallowing for 2 days. He is unable to elevate the right side of the palate. Which of the following labe
nerves in the photograph of the brain stem is most likely damaged?



A) B) C) D) E) F)

A 55-year-old woman comes to the physician because of a 3-month history of difficulty using her hands and a 3-week history of muscle cramps. She has h
b) weight loss during the past 5 weeks. Neurologic examination shows tongue fasciculations, and lower extremity weakness and atrophy. Sensory examin
A lesion at which of the following sites is the most likely cause of these findings?

) Cerebral white matter
) Corticospinal tract in the spinal cord
) Internal capsule
) Lower motoneurons
) Peripheral nerves

A 27-year-old woman comes to the physician for a follow-up examination. She underwent a cesarean delivery 2 months ago. Physical examination shows subcutaneous nodule adjacent to the surgical incision. Microscopic examination of the resected nodule shows fibrous connective tissue, macrophages, mu giant cells, fibroblasts, a few lymphocytes, and scattered fragments of polarizable foreign material. Which of the following substances that promotes fibrobl and proliferation most likely led to the development of this lesion?

) C3a
) Interleukin-1 (IL-1)
) IL-4
) Transforming growth factor-β
) Tumor necrosis factor

A 68-year-old man comes to the physician because he is concerned about changes in his sexual performance during the past year. He noticed the change started dating a 40-year-old woman after 25 years of living alone. "My orgasms are shorter and less intense than when I was married. I have to wait 2 or 3 having sex again." His pulse is 72/min and regular, and blood pressure is 138/78 mm Hg. Physical examination shows hair growth on the tops of the feet a Dorsalis pedis and posterior tibial pulses are +2 bilaterally, and his capillary refill time is 1 to 2 seconds. There is symmetric enlargement of the prostate wi Laboratory studies show a hemoglobin A_{1c} of 5.5%, a serum glucose concentration of 121 mg/dL, and a serum prostate-specific antigen concentration of 4 (N<4). Which of the following is the most likely cause of this patient's changes in sexual function?

) Atherosclerosis
) Benign prostatic hyperplasia
) Diabetic neuropathy
) Prostate cancer
) Psychogenic erectile dysfunction
) Normal aging

A 3-year-old boy with AIDS develops giant cell pneumonia 3 months after exposure to an unimmunized cousin who had a morbilliform rash, conjunctivitis, Koplik spots. The virus responsible for the pneumonia has which of the following types of genomes?

) Double-stranded DNA
) Negative-stranded RNA
) Positive-stranded RNA
) Single-stranded DNA

The breakdown of dipeptides and tripeptides to free amino acids takes place primarily in which of the following areas in the gastrointestinal tract?

) Intestinal mucosa
) Lumen of the duodenum
) Lumen of the large intestine
) Lumen of the stomach
) Mouth

A 65-year-old man comes to the physician because of difficulty sleeping for the past month. He says, "I have been awakening between 3 and 4 AM every m can't get back to sleep." He has impaired concentration and a decreased energy level. He used to read a lot and play cards with friends, but he has lost int activities. He has lost 10 kg (22 lb) over the past 3 months, and he has had recurrent thoughts of death since having a myocardial infarction and undergoin coronary bypass 5 months ago. His current medications include aspirin, metoprolol, and lisinopril. An ECG shows a heart rate of 72/min with a PR interval = 0.12-0.20 sec), a QRS interval of 0.08 sec (N <0.12 sec), and Q waves in leads II, III, and AVF. Which of the following drugs is most appropriate to add to egimen?

) Alprazolam
) Amitriptyline
) Buspirone
) Carbamazepine
) Haloperidol
) Methylphenidate
) Paroxetine

An 80-year-old man is admitted to the hospital because of a 2-week history of a severe, persistent urinary tract infection. An 80-mg dose of Drug X is admi
ntravenously. Thirty minutes after the infusion is complete, his serum concentration of Drug X is 4 µg/mL. Assuming a distribution half-life of 3 minutes and
half-life of 24 hours, the volume of distribution of this drug (in L) in the peripheral compartment is closest to which of the following?

) 2
) 5
) 10
) 15
) 20
) 50

A 35-year-old African American man comes to the physician for a routine examination. He recently read a pamphlet at a health fair on the importance of sc
skin cancer. He enjoys sailing and usually goes out on his boat every weekend when the weather is nice. He does not use sunscreen, but he states that he
burn." Physical examination shows no abnormalities. This patient is at increased risk for melanoma at which of the following locations?

) Back
) Chest
) Forehead
) Palms
) Scalp

A 35-year-old man is brought to the emergency department because he is disoriented and hallucinating. He has a 20-year history of alcoholism. On admis
hospital, he has a seizure. His blood pressure is 180/100 mm Hg. Serum potassium concentration is 2.5 mEq/L, and urine potassium concentration is 40 m
withdrawal is suspected. Which of the following is the most likely cause of the hypokalemia?

) Catecholamine-mediated intracellular shifts of K+
) Decreased dietary intake of K+
) Decreased release of renin
) Decreased urine flow rate
) Increased muscle breakdown

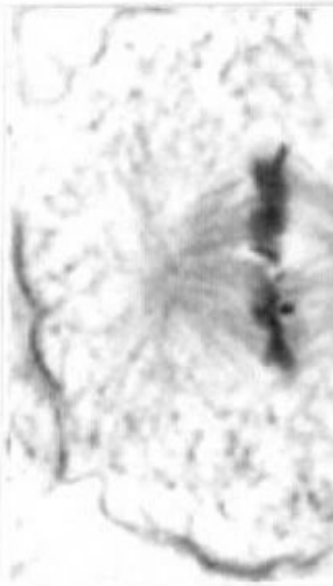
A 50-year-old woman with HIV infection comes to the physician for a follow-up examination. For the past 6 months, she has been receiving antiretroviral th
ncludes the nucleoside analogues zidovudine (AZT) and lamivudine (3TC), as well as the protease inhibitor nelfinavir. She is also receiving prophylaxis wi
or pneumocystosis and azithromycin for *Mycobacterium avium* complex. Her leukocyte count 2 weeks ago was 1200/mm^3 (50% segmented neutrophils).
viral load remains undetectable. Drug-induced bone marrow suppression is suspected. Which of the following drugs is the most likely cause?

) Azithromycin
) Lamivudine
) Nelfinavir
) Pentamidine
) Zidovudine

A 59-year-old man has repeated episodes of gouty arthritis unresponsive to preventive therapy. Which of the following drugs is most likely to increase uric n this man?

) Acetylsalicylic acid
) Colchicine
) Ketorolac
) Penicillin
) Probenecid

In a study of drug action on neoplastic cells in culture, drug X markedly inhibits cell replication. A microscopic view of a typical cell incubated with drug X is shown. Drug X is most likely to be which of the following?



A) Cyclophosphamide
B) Cyclosporine
C) Doxorubicin
D) 5-Fluorouracil
E) Vincristine

A 2-year-old boy is brought to the physician because of chronic bacterial respiratory infections since birth. He is currently asymptomatic. Physical examinat abnormalities. T- and B-lymphocyte counts and serum antibody concentrations are within the reference ranges. Natural killer cell count and function are no of cellular expression of human leukocyte antigen by flow cytometry shows absence of class I MHC-expressing cells. A diagnosis of bare lymphocyte synd made. This patient most likely has mutations in the genes encoding which of the following?

) Adenosine deaminase
) Fas ligand (CD178)
) Interleukin-2 (IL-2) receptor α chain (CD25)
) Peptide transporter (TAP)

n a culture of motile spore-forming bacteria, which of the following inhibits bacterial growth by causing double-stranded breaks in DNA?

) Addition of phenol
) Addition of streptomycin
) Irradiation with ultraviolet light
) Irradiation with x-rays
) Starvation for a carbon source

A 55-year-old man is diagnosed with coronary artery disease. He begins treatment with 81-mg aspirin to prevent thrombus formation and vessel occlusion njured vascular endothelium caused by atherosclerosis. Which of the following effects of aspirin on platelet function is most likely to decrease this patient's hrombosis?

) ~~Accelerated breakdown of vascular endothelial growth factors~~
) ~~Decreased adherence~~
) Inhibition of glycoprotein IIb/IIIa receptors
) Potentiation of contraction by thrombosthenin
) Release of calcium ions from the endoplasmic reticulum

A 4-year-old boy has a 1-cm round midline mass just inferior to the hyoid bone. The mass was present at birth and remains unchanged. The mass is most rom tissue that originated from which of the following structures?

) Pharyngeal arch
) Submandibular gland
) Thymus
) Tongue
) Trachea

A 73-year-old man has an incurable malignant neoplasm of the lung, and his condition is slowly deteriorating. He is virtually incapable of movement and ur without mechanical respiration; however, he remains mentally competent. He requests that the respirator be removed, indicating that he no longer wants to constant suffering. His children want the respirator to be continued. After discussing the matter with the children, the physician chooses to order removal o Which of the following best describes the physician's action?

) Legal but not ethical
) Ethical but not legal
) Both legal and ethical
) Neither legal nor ethical

A 25-year-old man comes to the emergency department because of a 3-day history of abdominal cramps and diarrhea. He appears anxious. Physical exar
oiloerection and diffuse abdominal tenderness. Neurologic examination shows no abnormalities. He is oriented to person, place, and time. The most likely
patient's condition is withdrawal from which of the following substances?

) Alcohol
) Benzodiazepine
) Cocaine
) Heroin
) Marijuana

A 35-year-old woman undergoes a left oophorectomy because of a 5 × 5-cm ovarian mass. During this procedure, which of the following structures is at gr
njury when dividing the suspensory ligament?

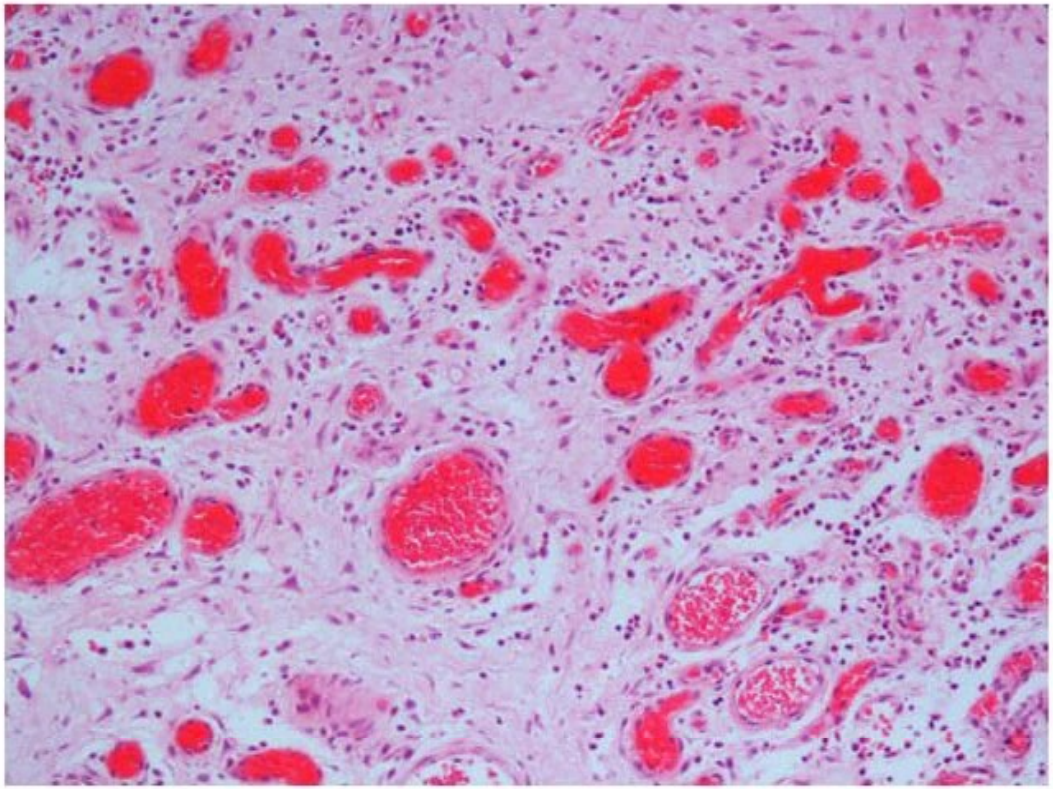
) Left internal iliac artery
) Left renal vein
) Umbilical artery
) Ureter
) Uterine artery

A 50-year-old woman is admitted to the hospital for management of an acute exacerbation of heart failure. She has been admitted to the hospital more tha during the past year for similar episodes. On admission, intravenous administration of a diuretic is begun, and her fluid intake is restricted to 2 L daily. Her 36.3°C (97.3°F), pulse is 88/min, respirations are 20/min, and blood pressure is 140/72 mm Hg. Bilateral basilar crackles are heard on pulmonary examina pitting edema of the lower extremities. Her fluid balance and weight are closely monitored. Two days later, the patient's weight and clinical status are uncha nurse finds the patient in the bathroom drinking directly from the faucet and holding a full pitcher of water, despite having already reached her fluid limit for of the following is the most likely explanation for this patient's lack of clinical improvement?

) Antisocial personality disorder
) Conversion disorder
) Diabetes insipidus
) Factitious disorder
) Inappropriate secretion of ADH (vasopressin)

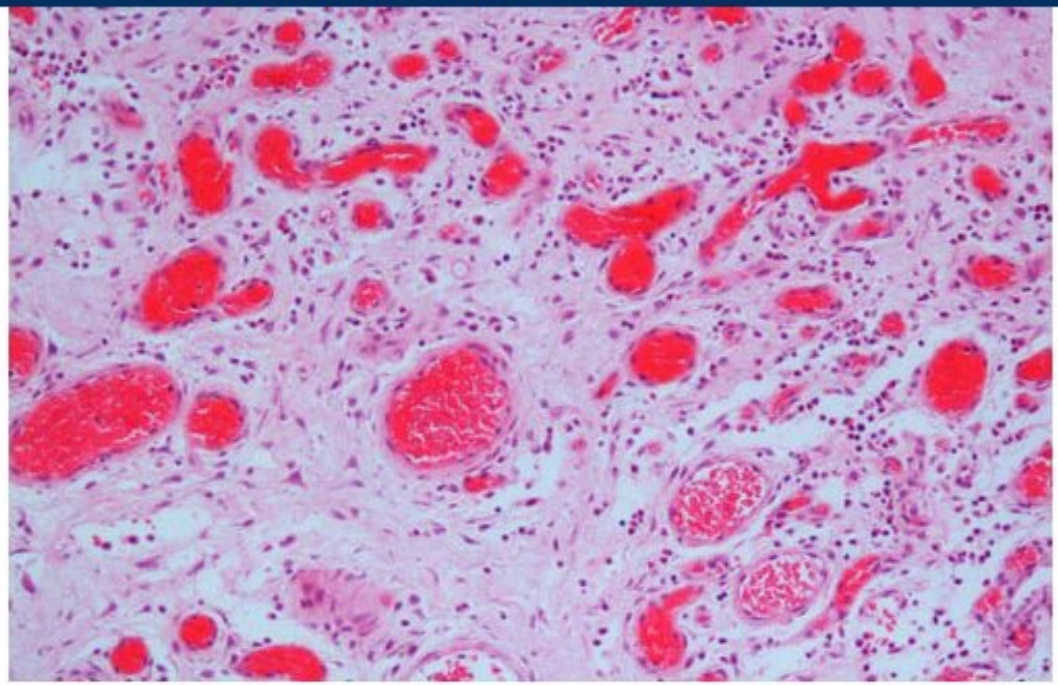
A 3-year-old boy has short stature and extremities and a relatively normal-sized trunk, a large head with a prominent forehead and low nasal bridge, and e
ordosis. The most likely cause of these findings is a genetic abnormality in which of the following?

) Calcium uptake
) Endochondral ossification
) Growth hormone synthesis
) Osteoclast activity
) Tendon formation



A 52-year-old man is admitted to the hospital for treatment of a massive acute myocardial infarction. Treatment with oxygen, β-adrenergic blockers, aspirin, reperfusion therapy is initiated. Eighteen days later, he develops ventricular fibrillation, from which he cannot be resuscitated. A photomicrograph of cardiac the site of infarct obtained at autopsy is shown. Which of the following best describes the appearance of this patient's heart?

) ~~Abscess~~
) ~~Coagulation necrosis~~
) Dense fibrous scar



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) Abscess
) Coagulation necrosis
) Dense fibrous scar
) Granulation tissue
) Granuloma

An 80-year-old woman, gravida 4, para 4, comes to the office because of a 6-month history of decreased frequency of bowel movements. She now has on movements weekly. Increased fluid and dietary fiber intake has not resulted in relief. She also reports a sensation of incomplete evacuation of her bowels a manually support the posterior vaginal wall in order to defecate. Colonoscopy at the age of 75 years showed extensive diverticula. Digital rectal examinatio evidence of gastrointestinal bleeding, fissure, mass, or hemorrhoids. Rectal tone and reflexes are normal. Which of the following is the most likely cause of symptoms?

) Absence of ganglionic cells in the colon
) Damage to the rectovaginal septum
) External anal sphincter spasm
) Inhibition of the gastrocolic reflex
) Transmural mucosal inflammation

A 40-year-old man who goes horseback riding 3 to 4 times weekly develops a painful swollen mass in his left inner thigh. Over the next 2 weeks, the mass circumscribed and very firm. Which of the following is the most likely diagnosis?

) Arteriovenous fistula
) Dermatomyositis
) Fasciitis
) Ganglion
) Hemangioma
) Myositis ossificans
) Sarcoma
) Synovial cyst